SURVEILLANCE AS A TOOL FOR EFFICIENCY AND LEGAL CONCERNS

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I. Introduction.

Surveillance is pervasive and enduring. From the dawn of human civilization, individuals and social groups have used surveillance as an effective tool for gathering information – data – and used various mechanisms to sort that information in useful ways to forecast and guide individual or group social behavior in everyday interactions. "[Surveillance] has always been a component of institutional routines and human sociality."[2] Additionally, from the start of human society our core cognitive process of internalizing and processing the "perceived world structure" is based upon an internal categorization process that works to provide the individual with the optimal amount of information while reducing cognitive cost as much as possible.[3] Collecting and categorizing information, on the part of the individual, can make sense of the world around them by associating similar attributes to different objects; or a lack of shared attributes, this creates a social structure of stability, through predictability, which helps guide the individual in everyday conduct.[4]

The physical and biological aspect of watching or surveilling has been the historical method for collecting data – though throughout recorded time different systems have been used to augment the scope and depth of collection. However, the modern era has brought with it different methods and processes for collecting data beyond our physical and biological constraints. These different methods are used in sorting, categorizing, and assembling that data in useful ways for practical application in the modern market-driven world. More recently, due to the liberalization of surveillance systems in the digital age, various systems are gathering,

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[2] David Lyon et al. *Introducing surveillance studies*, 1 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[3] *See* Eleanor Rosh, PRINCIPLES OF CATEGORIZATION (1978), *reprinted in* READINGS IN COGNITIVE SCIENCE, A PERSPECTIVE FROM PSYCHOLOGY AND ARTIFICIAL INTELLIGENCE 252-53 (Allan Collins & Edward E. Smith eds., 1988)
[4] *Id.* at 252-54.

collecting, sorting and storing more information "about the everyday activities of more people in the world than at any other time in human history."[5] Storing and categorizing information today has gone beyond the biological platform of cognitive categorization, along with its limitations. Instead, data is now stored in databases that can hold vast amounts of data. Additionally, the data collected is categorized by highly sophisticated algorithms with the ability to processes and categorizing information beyond what a single individual could obtain in a lifetime.[6]

Furthermore, the liberalization of surveillance systems has grown an emergence of democratization of data collected for economic purposes, or also known by some as consumer surveillance.[7] As consumer surveillance increases in the everyday affairs of the consumer, most modern service-oriented business' have become aware of the benefits that collecting, sorting, and categorizing consumer-oriented data can provide in an ever increasingly competitive marketplace. After all, from a corporation down to the mom and pop operation, they are all experiencing an ever-crowded marketplace, in which efficiency has become a guiding principle in the continuous quest for profitability and surveillance has lent itself as a useful tool in maximizing efficiency.

Additionally, the realization that surveillance can help achieve maximum efficiency ought to be apparent to the gaming industry, specifically Las Vegas, Nevada (Las Vegas). Furthermore, Las Vegas is poised to be the leader in data surveillance advancement for many reasons, but most notably because of its size, industry type, and the location. Data analytics companies from all over the country are now seeing the untapped potential of Las Vegas and

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[5] Mark Andrejevic, *Ubiquitous Surveillance*, 91 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[6] *See* William Bogard, *Simulation and post–panopticism*, 30 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012); *see* David Lyon et al. *Introducing surveillance studies*, 1 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[7] Lyon, *supra* note 1, at 5.

have begun a digital gold rush to capitalize on the staggering amounts of data collected annually on the Las Vegas Strip and elsewhere. However, if hordes of tech companies rushing into the Valley does not ring the proverbial alarm bells for the Las Vegas gaming industry, then raw numbers should. In 2017 the Nevada gaming industry generated 11 billion dollars (U.S) in revenue, [8] while nationally the gaming industry generated 76 billion dollars (U.S.);[9] Las Vegas roughly accounting for 14 percent of the national market. However, Macao, China generated nearly 33 billion dollars (U.S),[10] tripling that of Las Vegas. Furthermore, in 2015 the United States made up 40.1% of the global market share of gaming, losing nearly eight percentage points from 2010, while the Asian-Pacific market increased to 43.4% of the global market share.[11] While the above numbers do not directly reflect the loss of percentage points from Las Vegas to the global community, the numbers do reflect that global competitors are outpacing Las Vegas on the global market. No longer are the days where Las Vegas held the global monopoly on gaming, in today's market Las Vegas must compete with far-flung destinations like that of Macau, China or even closer to home, the 're-emergence' of Atlantic City and the possible proliferation of gaming across the United States.[12]

Additionally, to understand the potential usefulness of surveillance, surveillance systems should not be limited by the conceptualized normative role surveillance has been historically given – security centric – but expand our conceptualization of surveillance to include legitimate

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[8] Nevada Gaming Control Board, *Nevada casino gaming revenue from 2010 to 2017 (in billion U.S. dollars)*, Statista, https://www.statista.com/statistics/418686/nevada-casino-gaming-revenue/ (last visited Nov. 18, 2018).
[9] RubinBrown, *U.S. casino gaming market revenue from 2004 to 2017 (in billion U.S. dollars)*, Statista, https://www.statista.com/statistics/271583/casino-gaming-market-in-the-us/ (last visited Mar. 1, 2019).
[10] Gaming Inspection and Coordination Bureau Macao, *Gross revenue from gaming and gambling in Macao from 2007 to 2017 (in billion U.S. dollars)*, Statista, https://www.statista.com/statistics/253755/gross-revenue-from-gaming-and-gambling-in-macao/ (last visited Nov. 18, 2018).
[11] PwC, *Distribution of the global casino gaming market by region 2010 and 2015*, Statista, https://www.statista.com/statistics/271576/share-of-casino-gaming-revenue-worldwide-by-region/ (last visited Nov. 18, 2018).
[12] *See generally* Murphy v. National Collegiate Athletic Ass'n, 138 S.Ct. 1461 (2018).

economic interests. Thus, before discussing what surveillance can offer, surveillance must be conceptualized and defined. Additionally, once surveillance is conceptualized, a discussion can then take place in how existing and emerging surveillance systems may support the gaming industry's goal of profitability, by maximizing departmental efficiencies within the brick and mortar casino, adapting and developing services for emerging consumer groups, and targeting desired consumer groups for solicitation, procurement, and retention.

Also, as surveillance continues to pervade the mundane activities of everyday life and beyond, a growing concern of personal privacy increases. Modern service-oriented businesses are in a predicament; surveillance systems offer Casinos an unprecedented degree to understand their patrons on a personal level while striving for the ultimate personalized experience. However, with the amount of information that modern surveillance systems can provide brings new legal pitfalls that may snarl unwary companies in a landscape of legal battles and massive class-action lawsuits[13].

II. Conceptualization of surveillance in the digital age.

A. The Panopticon: watching and collecting data in a digital age.

In understanding modern surveillance and the impact on consumer behavior, a conceptual framework must be made, so that context and direction can be clear and focused. Here, this note will utilize the concept of the Panopticon used by many surveillance scholars. Jeremy Bentham developed the Panopticon as a new prison structure. The focus of this new structure was of increasing the efficiency of the prison system by cutting the cost of labor (prison guards) and

[13] *See* Irina Ivanova, *Marriott breach sparks multibillion-dollar suits, with more to come*, CBS NEWS (DEC. 4, 2018), https://www.cbsnews.com/news/marriott-data-breach-class-action-lawsuits-seek-billions-with-more-to-come/.

increasing the transparency of the prisoners, this would reduce future risk that would have been translated into extra cost by putting down prison riots, investigating inner prison crime, hiring additional personnel, etc.

The layout of the prison structure is "an annular building; at the center, a tower; this tower is pierced with wide windows that open onto the inner side of the ring."[14] From there the inner building is lined with cells, within each cell is a window "corresponding to the window of the tower."[15] Furthermore, Bentham's unique prison layout allowed a single guard to continuously observe all the prisoners from a single point within a tower centrally located within the prison, while on the other hand prisoners could only observe the tower, reminding the prisoners of their unseen observer.[16] Foucault argues that the panopticon serves as the structural conceptualization of surveillance in modern society as a tool to understand the interplay between the observer (governmental bodies) and the observed (citizens) within the contextualization of a hierarchal power structure.[17]

Moreover, Foucault's conceptualization of the panopticon underscores that the observed internalized the observer's gaze, thus "assuming ubiquitous surveillance,"[18] leading to desired behavioral outcomes. Here, surveillance may influence consumer practices in alignment with desired Casino goals. Thus, the consumer may be influenced to adopt more profitable behaviors which are propagated and normalized by the physical structure of the Casino and culture that flows within the structure.[19] The Stanford Prison Experiment; excluding the ethical debate about

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[14] Michel Foucault, Discipline and Punishment 200 (Alan Sheridan trans., Vintage Books 2d ed. 1995) (1977).
[15] *Id.*
[16] *Id.*
[17] *Id*. at 205.
[18] Greg Elmer, Panopticon—discipline—control, 23 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[19] See Michel Foucault, Discipline 205 (Alan Sheridan trans., Vintage Books 2d ed. 1995) (1977).

the experiment itself, demonstrated how individuals under ubiquitous surveillance quickly and readily assumed socially created roles, changing normal college students into complacent prisoners and over-assertive guards. The experiment, along with a wide range of scholarly work rooted within the experiment, indicates that "social context can influence, alter, shape, and change human behavior."[20]

Thus, the brick and mortar casino, propagating and normalizing a hedonistic culture, while operating at a minimum of 2000 cameras, with full coverage of the casino floor,[21] and where the operators of those cameras are unseen and unknown, represents the physical panopticon and forms the foremost laboratory in implementing Foucault conceptualization into practicality. Additionally, the "panoptic scheme" is applicable whenever there is a "multiplicity of individuals," and there is a desired behavior to "be imposed."[22]

Here, the very nature of Las Vegas; in particular the Strip, avails itself to the practical application of surveillance used as a means to influence consumer behavior. In 2016 alone, 42.94 million people visited Las Vegas, and in 2017, 39.01 million people visited.[23] Furthermore, in 2016, of the 42.94 million visitors that visited Las Vegas, 69% of those visitors were projected to have engaged in some form of gambling, while 2017 showed a projection of 74%.[24] The numbers do not lie; there is plenty of room for the gaming industry to innovate and become more efficient when it comes to consumer acquisition, retention, and guest expenditure. With millions

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[20] Craig Haney & Philip Zimbardo, *The past and future of U.S. prison policy: Twenty-five years after the Stanford Prison Experiment*, 53(7) AM. PSYCHOLOGIST 709, 709-10 (1998).
[21]. Jackie Valley, *You're Being Watched: Inside Las Vegas' Surveillance culture*, L.V. Sun (Oct. 5, 2014), https://lasvegassun.com/youre-being-watched/.
[22] Foucault, *supra* note 17, at 205.
[23] LVCVA, Number of visitors to Las Vegas in the United States from 2000 to 2017 (in millions), Statista, https://www.statista.com/statistics/221042/visitors-to-las-vegas/ (last visited Nov. 18, 2018).
[24] LVCVA, Share of visitors who gambled in Las Vegas in the United States from 2009 to 2017*, Statista, https://www.statista.com/statistics/411768/share-of-visitors-who-gambled-in-las-vegas-us/ (last visited Nov. 18, 2018).

of visitors coming from all parts of the world and all socioeconomic backgrounds brings a nearly unparalleled opportunity for the casinos in Las Vegas to gather detailed insight into what consumers want, need, and visualize emerging consumer trends.

Furthermore, casinos already have systems and personnel in place to track and store patterns "[of] human behavior and anomalies in data"[25], but many have yet to embraces the idea that the same data analysis that is used to keep the property safe and secure can be altered to make the property more efficient and thus more profitable.

B. Panopticon 2.0.

However, modern surveillance practices go beyond the traditional role of human actors watching and being watched within firm hierarchal structures. Instead, data can now be gathered from numerous non-human actors in a "decentralized and non-hierarchical structure,"[26]. Surveilling can now occur, from "[surveillance platforms] . . . capable of producing status location, and relational information interact[ing] routinely with devices worn by, or implanted in, individuals. These interactions generate data that are routinely integrated into networked data streams."[27]

Therefore, surveillance in the modern digital age can be understood as "algorithmic surveillance"[28], where data now collected from consumers – be it from player cards, CCTV, social media, etc. – is compiled into complex algorithms forming "simulations" of "real events,"

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[25] Valley, *supra* note 20.
[26] William Bogard, *Simulation and post–panopticism*, 30 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[27] Oscar H. Gandy, Jr, *Statistical surveillance: remote sensing in the digital age*, 129 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[28] Ayse Ceyhan, *Surveillance as biopower*, 43 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).

with the purpose of "predicting complex system behaviors, to planning and forecasting" emerging markets, and "profiling"[29] consumers for predisposed trends of purchasing behavior. This type of data collection is nothing new. Whole industries have been built upon gathering consumer information and categorizing that data into actionable intelligence. For example, Facebook – the foremost leader in data collection – has established a "40.6 billion dollar annual business."[30] In large part by collecting, analyzing, and classifying data from millions of online users, to discover their purchasing behavior, turning this data into actionable intelligence for marketing purposes and more recently political advertisements.[31] In addition, "Murka, a social casino game developer" partnered with Facebook to use Facebook's surveillance platforms to help locate "high-value players'' that would "most likely [] make in-app purchases" in games Murka provides.[32]

As alluded to above, this newer form of surveillance is "designed to uncover relationships among widely disparate information and enable predictive analysis of behavioral patterns."[33] Additionally, this algorithmic surveillance leads to "classification, evaluation, and discrimination"[34] of consumers "placed . . . [into] . . . a dynamic multidimensional matrix of identities,"[35] based upon statistical criteria, allowing businesses to create actionable intelligence in pursuing more efficient means of marketing to consumers, acquisition of consumers, and retention of consumers. The use of actionable intelligence can allow casinos to measure and

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[29] William Bogard, *Simulation and post–panopticism*, 30–31 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012)
[30] Natasha Singer, *What You Don't Know About How Facebook Uses Your Data*, N.Y. TIMES (Apr. 11, 2018), https://www.nytimes.com/2018/04/11/technology/facebook-privacy-hearings.html.
[31] *Id.*
[32] *Id.*
[33] Ayse Ceyhan, *Surveillance as biopower*, 43 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[34] Oscar H. Gandy, Jr, *Statistical surveillance: remote sensing in the digital age*, 125 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[35] *Id.*

influence "how individuals understand and respond to the [consumer oriented] options that are set before them," allowing casinos to "maximize the benefits and minimize the risks that are associated with managing [] [consumeristic] behavior of [] . . . consumers."[36] However, this post-panoptic form of surveillance is different in the traditional sense of panoptic surveillance, in that this sort of surveillance is "remote in distance, time, and manner,"[37] and "very little of this sensing will take place under the active control of human agents,"[38] but by sophisticated computer programs designed to classify, evaluate, and discriminate consumers into statistically significate groups, sharing similar consumer behavior, allowing companies a greater chance of predicting and meeting the needs of consumers.

The Las Vegas Strip is starting to utilize digital surveillance of consumer data but sadly is still behind the ball in implementation and practice. Currently the largest source of consumer collection and tracking for marking purposes comes from player cards.[39] There, the player card becomes a device that can collect "precise information about . . . gambling histories" from "what games [guests] like to play, how [guests] respond to different game functions" and "even how fast [guests] tend to press the buttons"[40] of the slot machine. The goal of tracking very detailed information is to achieve an immersive and personalized player experience.[41] The information that is collected from the point-of-contact is then fed into complex algorithms that will sort the consumers into categories indicating susceptible consumer behavior.[42]

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[36] *Id.*
[37] Oscar, *supra* note 23, at 127
[38] *Id*.
[39] Interview with Jordan Salmon, VP of Loyalty Marking, MGM Resorts International, in Las Vegas (Oct. 10, 2018) (on file with author).
[40] Evan Selinger, *Inside the casino, the house is always watching*, The Christina Science Monitor (June 3, 2015), https://www.csmonitor.com/World/Passcode/Passcode-Voices/2015/0603/Inside-the-casino-the-house-is-always-watching.
[41] *Id.*
[42] *Id.*

For example, by using the player card to collect all ranges of consumer behavior, the Casino can accurately profile the consumer on a "volatility index," indicating a particular consumer is more "risk-prone," thus adjusting the machine to fit the consumers style of play; having the consumer "sit through a long dry spell to get a large jackpot."[43]Additionally, this type of digital surveillance can work in the adverse by profiling the consumer with a risk aversion, leading the casino to push to the consumer to "mathematical pay tables" which "are programmed to dribble out a lot of small wins."[44] However, this source of data collection has some drawbacks, 1) the consumer must first seek out to get a player card, 2) the consumer needs to use the player card each time they decide to play, and 3) lastly the time it takes to collect and accurately profile a new gambler is dependent upon use.

Furthermore, the Las Vegas casino is situated as the ultimate point-of-contact for consumer data collection. There is little need for human-to-human observation, with the wide variety of surveillance systems implemented in casinos today — CCTV, Player cards, geolocation, cookies, booking information, etc. — augmenting the observer's ability to observe and collect. With a steady stream of consumer data, new and evolving algorithms can quickly classify, evaluate, and sort data into actionable intelligence.

III. Surveillance as a Tool for Efficiency.

Surveillance has the potential to allow the gaming industry – that profits on slim margins – to increase profitability through efficiency. By identifying, classifying, evaluating, and then statistical discriminating (sorting) information about individual consumers, into larger consumer categories, the industry can selectivity advertise services with statistical confidence that the

[43] *Id.*
[44] *Id.*

consumer will mimic the consumption practices of the categorical consumer group, while also adapting the industry's services to the desire of whatever categorical consumer group that facilitates growth and profitability. Additionally, data gathering (surveillance) and sorting can help the industry predict trends and act appropriately. Furthermore, the industry may utilize data analytics to exploit emerging markets and emerging consumer groups in the continual quest for growth.

In an ever shrinking and competitive market place – the Las Vegas Strip for example – companies are increasingly "vying for the same consumers money."[45] Therefore, modern companies; in particular casinos, ought to utilize the mass collection of the "wants, needs and desires of consumers."[46] The data that is collected can be assembled in ways that help modern casinos determine future actions concerning marketing decisions from the type of services that are proved to consumers to the "locations in which they operate,"[47] and where casino ought to place their capital in R&D. Data collection through surveillance should not be limited in the context of safety, as Jason Pridmore explains surveillance "in its most developed forms, . . . is used to influence, control, and monitor consumer choices, guiding certain consumers towards products and practices that are of value to corporations."[48] By using surveillance in this light, casinos can be closer than ever to provide the consumer with the ultimate personalized experience.

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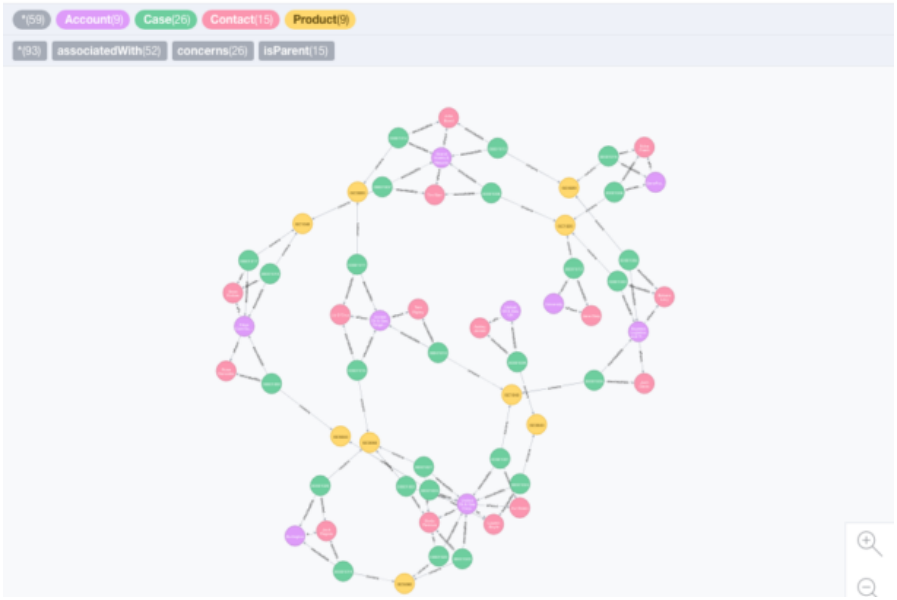
[45] Jason Pridmore, Consumer Surveillance, 322 ROUTLEDGE HANDBOOK OF SURVEILLANCE STUDIES (2012).
[46] *Id.* at 321.
[47] *Id.*
[48] Lee Torres, General Manager, John Kenedict, Chief Information Officer, Tjeerd Brink, Chief Financial Officer, Stuart Kerr, Chief Data Scientist, Panel at Global Gaming Expo: The Future State of Big Data in the Gaming industry: Pechanga Case Study (Oct. 10, 2018) (on file with author).

A. The Template: Pechanga.

A small Casino in California; Pechanga, is already using surveillance to maximize operational efficiency and have begun to personalize their patrons experience, which has translated into five times a return on their investment, "Improved operational KPI by 40%" – with one KPI directly linking to happiness and enjoyment of patrons, data maintenance cost decrease, and interestingly an increase in "parking capacity by twenty-six percent."[49]

There, Pechanga nominalized their data into visual graphs – graph databases – instead of continuing to use "data silos" or "relational databases" – gone are the days of burdensome Excel sheets – which presented data in a user-friendly form and allowed data analysts to discover relationships; relationship mapping, between differing nodes easily. For example; consumer (node 1) can be identified by a color-coded dot, and a table game (node 2) is identified as a different color-coded dot, with a line between the two indicating the relationship between the two nodes.[50] Below is a visual representation of relationship mapping:

[49] *Id.*
[50] *Id.*



[51]

One reason Pechanga decided to switch to graphs, besides the cost decrease, to "graph tech" is the ease at which relationships can be discovered and the possibility for the property to be fully connected[52] – each data silo is essentially no longer isolated from one another, but 'talks to each other' sharing information across all platforms in a continuous cycle of updating schemas and discovering new relationships between various nodes.

Additionally, once Pechanga switched to graphs Stuart Kerr at Pechanga began noticing some exciting relationships between patrons at the table games. Some consumers attracted other consumers to sit down and play at table games at a significantly higher rate than other consumers;[53] think of these consumers as the preverbal cool kid in school. This discovery led to the idea of a "guest rank" where individual consumers are ranked in a numerical order depending on the amount of influence they exert over other patrons.[54] With this information, Pechanga can

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[51] Pat Patterson, *Visualizing and Analyzing Salesforce Data with Neo4j*, STREAMSETS DATAOPS BLOG (May 17, 2017), https://streamsets.com/blog/visualizing-analyzing-salesforce-data-neo4j/ (visual representation of relationship mapping using Neo4j software in the context of oil and gas).
[52] Torres, *supra* note 46.
[53] *Id.*
[54] *Id.*

individually target these consumers with special promos and discounts with the idea that by selectively advertising to higher ranked consumers other consumers will be drawn in and play at the same or similar table game the ranked consumer is playing.

Additionally, this is just one of many ways that casinos can utilize actionable intelligence that "graph tech" simplistically displays for marketers and casino operators. Furthermore, by peering into the web of nodes and relationships, a forwarding looking organization can begin to know and understand their clients at a detailed level unprecedented in history. In knowing what relationships consumers have with whatever node they are interacting with, gives casinos the chance to craft a truly personalized experience. Through providing a fully immersive and personalized experience, consumer retention rates would increase, and logistical cost associated with consumer goods would decrease. Additionally, by knowing all the what, when, and where concerning a consumer, casinos can forecast with statistical significance the quantity and variety of goods needed and what services to prove at optimal cost — similar to what Amazon does.

Moreover, Pechanga is not only using surveillance to learn the relationships and influence their patrons have among one another, but also in optimizing their floor plan. By gathering vast amounts of consumer data, Pechanga can design an "intelligent floor" plan where every slot machine, restaurants, table game, restroom, parking spot, bar, and anything else one can imagine are placed in their most optimal locations. The endgame for Pechanga is to transform Pechanga into a “Smart Casino” where every system of data collection is interconnected with one another giving real-time usable data to personalize every patron's experience and find the most efficient means of carrying out daily operations.[55] However, this is

[55] *Id*.

merely the jumping off point of what surveillance systems – used for legitimate economic means – can do. Eventual such systems can help in "detecting fraud, levering predictions across multiple domains, [and] event-driven analysis"[56] providing real-time actionable intelligence to be used in the moment to achieve true personalization.

B. Road to Personalization: Biometrics.

With the proliferation of digital cameras and the growing trend of implanting cameras into slot machines, opens a new avenue in gathering consumer data on arguably the most critical data point Casinos feverishly chase after, are their patrons enjoying their time on the property and more importantly are patrons having fun gambling. Sentiment analysis coupled with facial recognition technology can offer a way to achieve optimal satisfactory levels for the consumer through a personalized gaming experience, which can translate into higher overall patron satisfaction leading to a higher rate of retention. Sentiment analysis has been used in gaming, video games that is, to achieve this very goal, a wholly immersive and personalized gaming experience.[57]

Facial-recognition technology has been on the Strip in a limited capacity for some years and only in some properties. However, recently the properties on the Strip have begun, or soon will begin, implement reliable facial recognition technology.[58] This "wave" of acceptance and implementation of facial recognition technology is arguably spurred on by the tragic events of

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[56] *Id.*

[57] Mike Ambinder, Presentation at Game Developers Conference: Biofeedback in Gameplay: How Valve Measures Physiology to Enhance Gaming Experience (Mar. 3, 2011), https://steamcdn-a.akamaihd.net/apps/valve/2011/ValveBiofeedback-Ambinder.pdf.

[58] Todd Prince, *Facial recognition technology coming to Las Vegas Strip casinos*, L.V. REV. J. (Oct. 12, 2018), https://www.reviewjournal.com/business/casinos-gaming/facial-recognition-technology-coming-to-las-vegas-strip-casinos/.

the October 1st shooting.[59] However, facial recognition technology should not be limited to a security-centric perspective but equally applied to legitimate economic motives. This view is accepted by some "forward-thinking" manufacturers who have begun to implement "biometrics into their casino products, greatly increasing the available data on table play."[60] This data coupled with sentiment analysis can provide adjustment to gameplay in real-time, placing players accurately on a "volatility index;" without a need for a player card, keeping players that are predisposed to different styles of play on the same machine for longer and increase the consumers overall enjoyment.[61]

The idea of identifying facial expression of players and adjusting in real-time gameplay is not new. In 2011, Valve presented to the Game Developers Conference that they use sentiment analysis to find ways to enhance players experience for a "more immersive, dynamic, and calibrated game[ing] experience,"[62] which is used to achieve higher player retention rates and higher player satisfaction. There, a small camera, attached to a computer screen, recorded "movement[s] of facial muscles" of players, during gameplay, which then was crossed reference to an arousal and valence index associated with preselected facial experiences.[63] This process provides for a near instantaneous responses measurement of the players' emotional state,[64] allowing for on the spot adjustments. Additionally, the practical application of sentiment analyses – applicable for all gaming – is the idea that developers and manufacturers of systems

[59] *Id.*
[60] *Id.*
[61] Evan Selinger, *Inside the casino, the house is always watching*, THE CHRISTINA SCIENCE MONITOR (June 3, 2015), https://www.csmonitor.com/World/Passcode/Passcode-Voices/2015/0603/Inside-the-casino-the-house-is-always-watching.
[62] Ambinder, *supra* note 55.
[63] *Id.*
[64] *Id.*

can furnish products that can collect players passive biofeedback to "modify game experiences" in real-time to adjusts for difficulty and "detect and respond to disengaged players."[65]

However, to date, sentiment analysis has mostly been "carried out on natural language processing," limiting sentiment analysis to "text-based."[66] However, with facial cognition software becoming cheaper and more reliable, the practicality of tracking and sorting emotional states of guest will avail itself as a useful tool for Casinos to make on the spot corrections or adjustments to optimize guest experiences. Additionally, this is what Gun Lake Casino (Gun Lake) announced in late 2018.[67] There, Gun Lake has implemented "state-of-the-art facial recognition software" in a pilot program, to collect data on their guests regarding their "age, gender, 'dwell time' and sentiment."[68] From there, the data collected is analyzed in real time, providing on the spot actionable intelligence geared towards "enhance[ing] the guest experience."[69]

Not only can floor staff receive actionable intelligence for on the spot decisions, but Gun Lake plans to use this facial recognition technology to personalize their marketing campaigns towards their guests.[70] Personalize marketing campaigns are done in part by implementing adaptive "signage" that can "captur[e] consumer information at the point of consideration," in order to "tailor the content" on the signage, depending "who is looking at it."[71] The goal for Gun

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65 *Id.*
66 Soujanya Poria et al., *Fusing audio, visual and textual clues for sentiment analysis*, 174 NEUROCOMPUTING 50, 50 (2016).
67 Brian Pempus, *Michigan Casino to Gather Data on the Emotional States of Gamblers Through Facial Recognition*, CARDPLAYER (Oct. 18, 2018), https://www.cardplayer.com/poker-news/23316-michigan-casino-to-gather-data-on-the-emotional-states-of-gamblers-through-facial-recognition.
68 *Id.*
69 *Id.*
70 *Id.*
71 *Id.*

Lake is to personalize "marketing messages to keep guests informed of offers" in real-time, via adaptive signage on the property or through mobile notification.[72]

Furthermore, Merit Lefkoşa Casino (Merit) in Northern Cyprus, implemented facial recognition technology to decrease operational inefficiencies on the property. There, Merit relied on traditional watch-lists "using eyes on the ground to manually check for known customers," which resulted in a significant amount of time exhausted on customer identification.[73] However, after implementing facial recognition technology, Merit has reported a "30 percent increase in productivity."[74] Furthermore, Merit uses facial recognition technology to "Identify 'overlooked' high rollers who have not been placed on the whitelist" and obtain valuable marking data from their customers[75], akin to Gun Lake. Also, beyond the 30 percent increase in productivity after implementing facial recognition technology, Merit reported a "2 percent increase in current measurable income and 25 percent decrease in manpower use."[76] However, it should be noted no specific performance indicators were listed and that other factors are likely to contribute to Merit's reported success.

Additionally, facial-recognition could be implemented at other-points-of-contact in crafting a truly personalized experience for consumers and streamlining many processes for the casino. Upon check-in, facial-recognition technology can give staff the ever so personal touch of "greet[ing] guests by their given name, which not only creates a streamlined check-in process but also makes guests feel more at home."[77] Additionally, individual profiles can be made containing

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[72] *Id.*
[73] NEC, *Face Recognition Solution – Merit Lefkosa Casino*, THE ECONOMIST (2018), http://safecities.economist.com/face-recognition-solution-merit-lefkosa-casino.
[74] *Id.*
[75] *Id.*
[76] *Id.*
[77] *3 Ways Facial Recognition Tech Can Generate Revenue for Hotels*, https://hospitalitytech.com/3-ways-facial-recognition-tech-can-generate-revenue-hotels (lasted visited Mar. 1, 2019).

actionable intelligence that staff can pull-up upon check-in. For example, informing the guests of "pool hours for their kids,"[78] what restaurants are nearby convention centers, or famously leaving the guest's favorite color of M&M in their room. As well, sentiment analysis could be used to gauge the enjoyment of guests on the floor, allowing staff the ability to determine the guest's enjoyment level and quickly rectify any discrepancies the guest may have.[79]

Biometric technology is proliferating in western society and may well become an accepted social norm for participating in the national economy. However, until that point in time approaches, privacy concerns are still on the forefront of guest's minds. Casinos must delicately balance the use of biometrics and their guest sense of anonymity. However, biometrics offer an intimate insight into the psyche of consumers, measuring guest satisfaction at the slot machine down to viewing parties. This insight enables casino staff to approach each guest with a personalized touch increasing guest satisfaction and retention.

C. A Little Big thing called Radio-Frequency Identification.

Additionally, the gaming industry can take a few pages out of the playbook from the happiest place on earth, the leader in consumer retention and personalization, Disney. If anyone has stopped by Disneyworld in Florida lately, you will notice there is a fashionable little wristband everyone is wearing. That little wristband (MagicBand) is Disney's one billion dollar bet [80] and arguably will change the game within the hospitality industry; concerning the collection of consumer data and personalizing the guest experience. Disney's MagicBand is embedded with radio-frequency identification (RFID) technology linking the wristband to the

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[78] *Id.*
[79] *Id.*
[80] *See* John Smith, *Wearables and Big Data Make It a Small World After All at Disney Theme Parks*, HARVARD BUSINESS SCHOOL: DIGITIZATION CHALLENGE (Nov. 18, 2016) https://rctom.hbs.org/submission/wearables-and-big-data-make-it-a-small-world-after-all-at-disney-theme-parks/.

guests MyMagicPlus account and "[hundreds] [of] systems" within the park "streaming real-time data about where guests are, what they're doing, and what they want."[81] Additionally, consumers wearing the Magicband also "don't need to carry cash, because the MagicBand is linked to [the] [guests] credit card"[82] making transactions quick, seamless and frictionless.

Since the implementation of RFID technology in Disney's MagicBand, "it[] [has] [become] evident that the implementation of this device can help save costs in areas such as food preparation, staffing, etc."[83] Additionally, since the implementation of the MagicBand in 2013[84] attendance at Disneyland has increased by a few million[85] and Disneyworld in Florida has seen similar growth.[86] However, as to date the data available only a correlation between growth and RFID implementation, and this note has not addressed the myriad of other factors that may be reasonable for the growth in attendance. Nevertheless, the available data should raise the

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81 Cliff Kuang, *Disney's $1 Billion Bet on a Magical Wristband*, WIRED (Mar. 10, 2015), https://www.wired.com/2015/03/disney-magicband/.

82 *Id.*

83 Smith, *supra* note 78.

84 *See* Brooks Barnes, *At Disney Parks, a Bracelet Meant to Build Loyalty (and Sales)*, N.Y. TIMES (Jan. 7, 2013), https://www.nytimes.com/2013/01/07/business/media/at-disney-parks-a-bracelet-meant-to-build-loyalty-and-sales.html.

85 *See* Themed Entertainment Association, Attendance at the Disneyland theme park (Anaheim, California) from 2009 to 2017 (in millions), Statista, https://www.statista.com/statistics/236154/attendance-at-the-disneyland-theme-park-california/ (last visited Mar. 2, 2019).

86 *See* Themed Entertainment Association, Attendance at the Magic Kingdom theme park (Walt Disney World Florida) from 2009 to 2017 (in millions), Statista, https://www.statista.com/statistics/232966/attendance-at-the-walt-disney-world-magic-kingdom-theme-park/ (last visited Mar. 2, 2019); *See also* Themed Entertainment Association, Attendance at the Epcot theme park (Walt Disney World Florida) from 2009 to 2017 (in millions), Statista, https://www.statista.com/statistics/236164/attendance-at-the-walt-disney-world-epcot-theme-park/ (last visited Mar. 2, 2019); *See also* Themed Entertainment Association, Attendance at the Disney's Animal Kingdom theme park (Walt Disney World Florida) from 2009 to 2017 (in millions), Statista, https://www.statista.com/statistics/236167/attendance-at-the-walt-disney-world-animal-kingdom-theme-park/ (last visited Mar. 2, 2019); *See also* Themed Entertainment Association, Attendance at the Disney's Hollywood Studios theme park (Walt Disney World Florida) from 2009 to 2017 (in millions), Statista, https://www.statista.com/statistics/236168/attendance-at-the-walt-disney-world-hollywood-studios-florida-theme-park/ (last visited Mar. 2, 2019).

eyebrows of casino executives, by showing a path to gain an edge on the competition, through streamlining services and decreasing back-of-house operational costs.[87]

Although this may be a shameless plug for Disney, the gaming industry can learn a thing or two in how to implement RFID technology beyond fraud detection and security purposes. Moreover, RFID is a platform already being used in some casinos to deter theft, and "identify legitimate chips and detect fakes" by implementing RFID technology in their chips.[88] Beyond RFID security applications, RFID technology can be used to create a seamless check-in process for consumers by tagging luggage; item-level tracking, at the departing airport to the guest's room, where the guest only needs to check-in and find all of their luggage ready for them in their room.[89] Casinos could build off their existing mobile apps, allowing the guest to participate in this quick and frictionless process. This is what Disney does, by allowing guests to "sign up in advance for the so-called "Magical Express" — akin to a player's reward card — allowing the guest's luggage to be "tagged at [their] home airport, so that it can follow [them] to [their] hotel, then [their] room" eliminating the hassle that guests have to drag their luggage around.[90] Additionally, the MagicBand can foster an environment of personalization by providing actionable intelligence to the park staff and potentially other point-of-contact systems at the park; if guests opt in.[91] For example such actionable intelligence can allow park characters to greet

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[87] *See* Chieng We Ng, *Improved back-of-the-house processes with RFID enabled it model for hospitality industry in Singapor*e, UNLV THESES, DISSERTATIONS, PROFESSIONAL PAPERS, AND CAPSTONE (Sep. 2010), https://digitalscholarship.unlv.edu/thesesdissertations/698/?utm_source=digitalscholarship.unlv.edu%2Fthesesdissertations%2F698&utm_medium=PDF&utm_campaign=PDFCoverPages; See https://hospitalitytech.com/rfid-hospitalitys-untapped-tool.

[88] *See* Alorie Gilbert, *Vegas casino bets on RFID*, CNET (Feb. 9, 2005), https://www.cnet.com/news/vegas-casino-bets-on-rfid/.

[89] Kuang, *supra* note 79.

[90] *Id.*

[91] Barnes, *supra* note 82.

guests by name or enables a mechanical bird in line, to mention individual guests nearby in a scripted event.[92]

Additionally, RFID technology is a cheap, reliable way to track objects in real time and use what actionable intelligent is gathered in reducing cost and increasing efficiency for back-of-house operations. RFID technology can decrease the inefficiencies and waste in back-of-the-house operations involving the supply chain of consumer goods that casinos offer guests, notably food and beverage. The US Food and Drug Administration has indicated that "Up to 20% of foods are discarded due to spoilage in the supply chain."[93] These losses translate to casinos on a smaller scale, but never-the-less spoilage within the internal supply-chain takes away lost opportunities of revenue and possible secondary purchases. However, implementation of RFID can increase inventory forecasting, ease of excess to inventory, reduce human error, and shorter workflow.[94] Moreover, in a past study, Wal-Mart; one of the forerunners in implementing item-level RFID tracking, reduced the cost of labor by 15% and saved 250 million dollars (US) in their supply chain traceability operations.[95] However, Wal-Mart has not been the only company to implement RFID technology to reduce cost and increase efficiencies; this approach has been across multiple industries, from the public sector to the entrainment sector.[96] The example given in decreasing inefficiencies in an organizations internal supply-chain is the starting point. The real value in implementing RFID technologies system is the ability for the casino to gather

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92 *Id.*
93 *See Cost reduction in retailing & products using RFID*, IDTECHEX (July 13, 2005), https://www.idtechex.com/research/articles/cost_reduction_in_retailing_and_products_using_rfid_00000205.asp. [hereinafter Cost Reduction].
94 Chieng, *supra* note 85, at 25.
95 *See Cost Reduction*, *supra* note 91.
96 Chieng, *supra* note 85, at 19-20.

actionable intelligence by "leveraging RFID's . . . [capability] of connecting various back-of-the-house systems and processes to identify, trace, and locate all objects and peoples in real-time."[97]

This interconnectivity between system manifest in part by increasing the personalization casinos can offer to their guests by allowing the staff the greet all guests "by name at all service encounters," including "check-in and in-room dining" all of "their preferences such as preferred room and bed types and smoking preferences are recognized," and the casino can match what services and goods the guests are more predisposed to purchases.[98] Additionally, this personalization can take place on the casino floor by allowing floor staff to greet the guest by name, for example informing cocktail waitresses what guests are in their zone, how long it has been since the guest has been served, and what are the guest's drink preferences. Additionally, a past study supports the proposition that a personalized experienced offered by Casinos can positively affect consumer loyalty,[99] thus increase consumer retention.

However, RFID technology can be used in a variety of other ways. An exciting way RFID tech is popping up is in the realm of Esports. There, RFID technology can be used to collect real-time event data, to assist in operating the event in the most efficient and profitable manner available. RFID wristband can track "foot flow, capacity levels, popular areas, [and] [merchandise] sales."[100] With the data collected, event organizers can create a smart layout increasing consumer output and make on the spot corrections concerning inefficiencies. The application for the modern casino is evident, especially the Las Vegas Strip. Casinos can use

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[97] *Id.* at 22-23.
[98] *Id.* at 14.
[99] Hee Lee & Carolyn U. Lambert, *The Influence of Technology-Enabled Customer Relationship Management on Customers' Attitude Toward Service Quality and Loyalty*, 11 JOURNAL OF FOODSERVICE BUSINESS RESEARCH 363, 379-78 (2008).
[100] *RFID technology: A game-changer for Esports events*, US BLOG: IDEAS, RFID (Sep. 21, 2018), https://www.idcband.com/blog-us/rfid-technology-a-game-changer-for-esports-events/.

RFID technology; along with other surveillance technologies, to optimize their floor plans and in real-time look at consumer consumption practices and act upon that intelligence to optimize consumer satisfaction and consumer spending. Additionally, the data collected can be used by casinos to "improve key operational aspects and identify new revenue-generating opportunities."[101]

However, RFID technology is likely not the end all be all answer in reducing inefficiencies. The solution is for lateral and horizontal communication between platforms, where each platform can capture a perspective of the guest that another platform is incapable of, thus forming a more reliable digital image of the guest. Additionally, RFID technology is increasingly availing itself as a cheap platform for data collection. For Casinos to stay ahead of their competition and provide streamlined services that are frictionless and personalized, RFID technology can be a useful tool to collect, measure, and predicted what services are needed for current and future guest, while providing a frictionless experience on property.

IV. Legal Concerns.

A. General Data Protection Regulation

The Las Vegas casino industry faces a new challenge from across the pond. The European Parliament approved the General Data Protection Regulation (GDPR) on April 14th, 2016 and since may 25th 2018 the regulation has been enforced.[102] Furthermore, the GDPR covers vast swaths of various industry's from "healthcare to banking."[103] Additionally, The

[101] *Id.*
[102] EUROPEAN UNION GENERAL DATA PROTECTION, https://eugdpr.org/.
[103] *Id.*

GDPR provides data subjects some important right's regarding their data.[104] One of the enumerated rights is the right of access. This right allows data subjects "to obtain from the controller confirmation as to whether or not personal data concerning him or her are being processed."[105] This right is essential as it acts as a gateway for data subjects to asserts other rights enumerated in the GDPR. Also, the GDPR provides data subjects the ability to correct inaccurate personal data held by data controllers and enables data subjects to complete any incomplete data held by data controllers.[106] Furthermore, upon request from the data subjects, controllers of data must "erase personal data without undue delay," if the data is no longer "necessary in relation to the purposes for which they were collected."[107] Also, erasure may occur if the data subject withdraws consent, based upon data that has previously been allowed by the data subject, to be collected and that data is used for multiple specified purposes, or an Article 21(1) challenge.[108]

Additionally, data subjects may restrict how their data is processed if the "accuracy of the personal data is contested", the "controller no longer needs the personal data for the purposes of the processing," upon an Article 21(1) challenge, or if the "processing [of data] is unlawful," but the data subject "requests the restriction" instead of erasure.[109] Also, the data subject may retrieve any personal data that has been provided to the controller and proved that same data to another controller.[110] This must be done "without hindrance from the controller to which the

[104] Commission Regulation 2016/679, art. 4(1), 2016 O.J. (L 119) (personal data is any information concerning an identifiable natural person).
[105] Commission Regulation 2016/679, art. 15, 2016 O.J. (L 119).
[106] Commission Regulation 2016/679, art. 16, 2016 O.J. (L 119).
[107] Commission Regulation 2016/679, art. 17, 2016 O.J. (L 119).
[108] *Id.*
[109] Commission Regulation 2016/679, art. 18, 2016 O.J. (L 119).
[110] Commission Regulation 2016/679, art. 20, 2016 O.J. (L 119).

personal data have been provided."[111] Lastly, data subjects may object at any time to the processing of his or her data, if used for profiling or is based upon provisions (e) through (f) outlined in Article 6(1).[112]

Beyond the rights enumerated in the GDPR, the gaming industry in Las Vegas may face GDRP compliance challenges with "the possibility of staggering fines,"[113] looming in the background for failing to comply with new regulation concerning the industry's data collection practices. This is because the GDPR "applies to all companies that hold data of individuals within the European Union," which may expose "large gaming companies,"[114] like that of the Las Vegas Sands Corporation or MGM Resorts International to future liability.

Furthermore, at the time this note was written, Marriott — an industry leader in providing personalized experiences for their guests — was a victim of a massive data breach. It is estimated that "as many as 500 million guests" had their personally identifiable data stolen by hackers.[115] However, over time, the number of potential consumer victims may vary. The question is out if Marriot will face possible GDPR sanctions and fines. If so, the fines levied by the EU could reach "up to 4% of [Marriott's] annual global revenue,[116] estimated to be around 900 million dollars.[117] However, within the EU an investigation conducted by the IOC is

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111 *Id.*
112 Commission Regulation 2016/679, art. 21, 2016 O.J. (L 119); *see also* Commission Regulation 2016/679, art. 6(1)(e)–(f), 2016 O.J. (L 119).
113 Cassie Stratford & Theresa Guerra, *The Evolution of Cyber Risk: What Your Clients Need to Know*, NEVADA GAMING LAWYER, Sept. 2018, at 59.
114 *Id.*
115 Omar Oakes, *Marriott potentially exposed to first big GDPR fine after Starwood data breach*, US CAMPAIGN (Dec. 3, 2018), https://www.campaignlive.com/article/marriott-potentially-exposed-first-big-gdpr-fine-starwood-data-breach/1520070.
116 *Id.*
117 Doug Kass, *How Bad is Marriott's Starwood Data breach?*, MSSP ALERT (Dec. 3, 2018), https://www.msspalert.com/cybersecurity-breaches-and-attacks/compliance/how-bad-is-marriott-breach/.

underway to shed light on what occurred.[118] This breach should have every casino executive, board member, and IT department rushing to GDPR compliance and making sure their data protections are up to date and complainant.

Additionally, GDPR may present a conflict of law issues. The Nevada Gaming Commission (Commission) issued a report indicating that licensees will need to meet the requirements issued by the Commission and the regulatory requirements put in place by the GDPR.[119] Simply put, noncompliance to regulation by the Commission because of compliance to the GDPR will not be a valid argument.[120] Furthermore, the "commission added that gambling companies should retain customers' data for five years after the relationship ends, 'where the data in any way relates to regulatory compliance.'"[121] This requirement may cause some conflict concerning the rights enumerated in the GDPR. However, it is likely that the GDPR will "bow to reasonable law enforcement concerns,"[122] like anti-money laundering laws. However, GDPR compliance along with Local compliance regulations will likely cause added pressure and expense to companies who collect personal data.

In 2016, 42.94 million individuals visited the sunny Las Vegas Valley, and in 2017, 39.01 million individuals visited Las Vegas,[123] with roughly a million and a half coming from

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[118] Yiannis Mouratidis, *GDPR May Add Up To $915M Marriott's Data Breach Expenses*, FORBES (Jan. 9, 2019), https://www.forbes.com/sites/yiannismouratidis/2019/01/09/gdpr-may-add-up-to-8-8b-marriotts-data-breach-expenses/#4d554e7b62e.

[119] Mark Richards, *GDPR Will Put Gambling Companies Under Pressure from Regulators and Customers*, VEGASSLOTONLINE (Apr. 13, 2018), https://www.vegasslotsonline.com/news/2018/04/13/gdpr-will-see-gambling-companies-pressure-regulators-customers/.

[120] *Id.*

[121] *Id.*

[122] RSA, *GDPR: Conflicted Compliance, Conflicting Rules are a Bridge to Nowhere*, SC MEDIA 2 (2017), https://www.rsa.com/en-us/offers/gdpr-conflicted-compliance.

[123] LVCVA, Number of visitors to Las Vegas in the United States from 2000 to 2017 (in millions), Statista, https://www.statista.com/statistics/221042/visitors-to-las-vegas/ (last visited Nov. 18, 2018).

European Nations.[124] International tourists form a healthy percentage of visitors to the Las Vegas Strip, and that percentage is likely to continue to grow.[125] The industry is faced with a challenge in collecting and processing data from this segment of the population due to the current climate. The gaming industry must be aware of the protections and requirements the GDPR seeks to promote and the growing trend of consumer data protections coming down the pipeline.

B. General Data Protection Regulation: Safeguards.

The initial step in safeguarding an organization from legal risk is to understand what data the organization has, why the organization has it, and what the data is being used for. This requires the Casino to conduct data mapping to discover "what information the [casino] has, where the information is located, who has access to the information, how the information is used, and how the information is transferred to any third parties."[126]Additionally, it is also important to track how long the data will be retained and the purposes for that retention.[127] Data mapping can be a tedious and lengthy process depending on the size of the organization and will likely involve cross-departmental cooperation from marketing to security.[128] However, a benefit; beyond compliance and risk reduction, for Casinos in data mapping is the ability to quickly see what data the Casino has and may expose "previously hidden patterns"[129] that can be utilized in marketing campaigns or reduction in departmental inefficiencies.

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[124] LVCVA, 2017 International Visitation by Country & World Region, LVCVA, https://www.lvcva.com/stats-and-facts/visitor-origin/ (last visited Mar. 31, 2019).
[125] *Id.*
[126] Sara Jodka, *Don't Gamble With The GDPR*, GAMING AND HOSPITALITY PRACTICES BLOG (May 7, 2018), http://gamingandhospitalitypracticeblog.dickinson-wright.com/2018/05/dont-gamble-with-the-gdpr/#page=1.
[127] Philippe Gilliéro, *Towards GDPR compliance as a best practice: a primer for Swiss SMEs*, JUSLETTER IT, Sep. 26, 2018, at 3, https://jusletter-it.weblaw.ch/en/issues/2018/26-September-2018.html.
[128] *Id.*
[129] Sharon Grufferty, *Big data mapping: 4 ways it can give you an advantage*, TECHRADAR (Sep. 18, 2014), https://www.techradar.com/news/software/business-software/big-data-mapping-4-ways-it-can-give-you-an-advantage-1265505.

i Notice.

The GDPR requires companies that process personal information to give "data privacy notice" "describing how the organization collects, uses, retains, and discloses their personal data."[130] Additionally, this notice should be broken down into eight parts;

> (i) The type of data collected (what) (ii) the purpose of such collection (why) (iii) the retention period (how long), (iv) the recipients with whom you share the data and the reasons for such sharing (with whom), (v) the location of such processing and potential transfer to third countries of such data (where), (vi) the technical and organizational measures in place to ensure the confidentiality, integrity and authenticity (CIA) of the data, (vii) the data subject rights with regards to such data and (viii) contact details in case of any question.[131]

The notice helps to provide the consumer with additional information in making an informed decision in the marketplace while promoting a goal of the GDPR – transparency. However, such policies will need to be translated to the appropriate language for whichever consumer group that the data is being processed from or for while maintaining an easily accessible way consumers can find the stated policy.[132] Additionally, "any amendment to existing policies or adoption of new ones should also be communicated to existing customers through a defined process."[133] Moreover, a casino on the Strip may "tailor" privacy notices "to [their] specific needs, such as an icon that will notify data subjects of the presence of a CCTV for instance."[134]Alternatively, the casino may give a disclaimer to guests, informing them of data collection, through player cards

130 Gilliéro, *supra* note 125, at 4.
131 *Id.* at 4,5.
132 *Id.* at 5.
133 *Id.*
134 *Id.*

or internet use. Finally, data privacy notices "must always accurately reflect, among other things, how consumer data is tracked and used."[135]

ii Processing.

Consent is a vehicle that various companies use to collect and process personal information. To stay GDPR-compliant, casinos on the Strip may seek consumer consent during their stay. Consent can be obtained from the guest during the check-in process by having the guest sign consent forms at the front desk or at the time of booking. Additionally, casinos may implement various other techniques to seek consent where ever data is being gathered and is finding its way "into any sort of database."[136] Additionally, the casino may take an alternative path for processing their data based upon "legitimate interest."[137] To determine if the processing of data is legitimate, a "legitimate interests' assessment"[138] is recommended. This can be done by answer three simple questions (1) "Is the processing necessary? Is there another way to achieve the desired outcome," (2) "Does the processing meet the reasonable expectation of the individual," and (3) "Is the processing likely to interfere with the rights and freedoms of the individual."[139] Also, data collection and processing for gaming compliance likely falls under a legitimate interest; however issues may raise if the data collected is used for multiple specified purposes.

Furthermore, casinos must be careful when collecting data for "direct marketing (other than e-marketing)" or handling "client data," where an "assessment must be carried out," looking

[135] Stratford, *supra* 111, at 60.
[136] *Id.*
[137] Gilliéro, *supra* note 125, at 6.
[138] *Id.*
[139] *Id.*

to see if any right or freedoms of the consumer is infringed.[140] However, the benefit of using a legitimate interest, if applicable, is the casino may "raise some defense to further process[ing] the data at stake."[141]

iii. Data Breach Plan.

Having a response plan to a data breach is a critical part to any company that stores and collects personal data. Data breaches seem to be occurring routinely, and the headlines of newspapers are filled with organizations that have failed to adequately respond or notify proper authorities and in a timely and proper manner. Therefore, it is best practice, and GDP compliant[142] to implement an appropriate response plan in case of a data breach. A basic structuring of a plan should include the "identification of the incident,"[143] how it was discovered, who discovered it, when it was discovered, and where it was discovered.[144]

Additionally, an investigation should take place to find the initial cause of the breach and determine if external forensics teams need to be hired[145] to remove "hacker tools and address any other security gaps."[146] Once the breach has been identified, reporting to the appropriate authority; internally or external, should take place.[147] However, such communication should be tightly controlled by the response team to cut down on any misinformation given.[148] In addition, once reporting has taken place, notification to data subjects and the appropriate authorities

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[140] *Id.* at 6,7.
[141] *Id.* at 7.
[142] *Generally see* Commission Regulation 2016/679, art. 33, 2016 O.J. (L 119).
[143] Gilliéro, *supra* note 125, at 12.
[144] *Id.*
[145] *Id.*
[146] *Data Breach Response Guide*, EXPERIAN 21 (2017), https://www.experian.com/assets/data-breach/white-papers/experian-2017-2018-data-breach-response-guide.pdf.
[147] Gilliéro, *supra* note 125, at 12.
[148] *Id.*

should be notified in accordance to local laws[149] and comply with the 72-hour timeline outlined in the GDPR.[150] Once notification, if needed, is given an evaluation of the data breach response plan should take place to identify any areas that need improvement.[151] Furthermore, employee training should occur to rectify any areas of concern and disseminate best privacy and cybersecurity practices.[152]

V. Conclusion

In an ever-shrinking marketplace, the gaming industry in Las Vegas must implement data collection and processing technology to acquire and retain new consumers. The industry has begun to realize that technology – data collecting – is a vital tool for the longevity and profitability of the industry. Additionally, data collection and processing of that data is a fundamental tool to "refining and customizing the overall guest experience."[153]Data collection can be done by a variety of surveillance platforms, from RFID to CCTV. Such platforms have already been implemented, to some degree, in daily Casino operations. However, such platforms have not been fully utilized beyond a security-centric perspective. Moreover, case studies from across industries suggest that if Casinos in the Las Vegas valley gear their existing platforms and adopt new surveillance system, operational inefficacies will decrease, guest satisfaction will increase, retention rates will rise, and revenue will positively be impacted.

Furthermore, the implementation of practices that comply with the GDPR may involve large amounts of "cost and time"[154] However, it is essential for the industry to get ahead of the

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149 *See* Gilliéro, *supra* note 125, at 12; *see also Data Breach Response Guide*, *supra* note 144.
150 Commission Regulation 2016/679, art. 33, 2016 O.J. (L 119).
151 *Data Breach Response Guide*, *supra* note 144.
152 *Id.*
153 Stratford, *supra* 111, at 59.
154 Gilliéro, *supra* note 125, at 15.

ball, that is consumer data protection before domestic regulation pops up. There is already a growing trend and concern for the privacy of consumer data not only overseas but here domestically. In California, a miniaturized form of the GDPR, the "California consumer privacy Act of 2018" will "go into effect January 1, 2020."[155] The direction seems to forecast a marketplace where consumer data is protected at greater length then they are today. If the gaming industry is not forward-looking, such regulation will leave the industry vulnerable to the risk of future litigation and may, in the end, turn future consumers off to their product and expose the industry to a significant amount of risk.

[155] Stratford, *supra* 111.